

The following listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method for enhancing bone formation in a mammal in need thereof comprising administering to said mammal an effective amount of a lanthanum (III) compound, wherein said mammal has (a) a bone fracture, bone trauma, or a bone deficit condition associated with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment, and/or (b) a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's disease, ~~osteoarthritis, rheumatoid arthritis~~, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous dysplasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease.

2. (Currently Amended) A method for enhancing bone formation in ~~according to claim 1 wherein the mammal is a human~~ in need thereof comprising administering to said human an effective amount of a lanthanum (III) compound, wherein said human has (a) a bone fracture, bone trauma, or a bone deficit condition associated with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment, and/or (b) a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's disease, osteoarthritis, rheumatoid arthritis, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous dysplasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease.

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)
7. (Currently Amended) A method according to claim 48, 6 wherein said osteoporosis is any one of primary osteoporosis, secondary osteoporosis, post-menopausal osteoporosis, male osteoporosis and steroid induced osteoporosis.
8. (Previously Presented) A method according to claim 2 wherein the human has a bone fracture, bone trauma, or a condition associated with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment.
9. (Original) A method according to claim 2 wherein the lanthanum (III) compound is selected from the group consisting of lanthanum chloride, lanthanum carbonate, lanthanum salts, chelates and derivatives thereof, lanthanum resins and lanthanum absorbants.
10. (Currently Amended) A method according to claim 2, 9 wherein said lanthanum (III) compound is selected from the group consisting of lanthanum carbonate, lanthanum carbonate hydrate and lanthanum chloride.
11. (Original) A method according to claim 2 wherein the effective amount of lanthanum (III) compound is from 0.05 mg/Kg/Day to 50 mg/Kg/Day.
12. (Original) A method according to claim 11 wherein the effective amount of lanthanum (III) compound is from 0.1 mg/Kg/Day to 10 mg/Kg/Day.
13. (Currently Amended) A method for increasing bone density in a mammal in need thereof comprising administering to said mammal an effective amount of a lanthanum (III) compound, wherein said mammal has (a) a bone fracture, bone trauma, or a bone deficit condition associated with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment, and/or (b) a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's

disease, ~~osteoarthritis, rheumatoid arthritis~~, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous dysplasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease.

14. (Currently Amended) A method for stimulating osteoblast differentiation in a mammal in need thereof comprising administering to said mammal and contacting said osteoblasts with an effective amount of lanthanum (III) compound thereby stimulating differentiation, wherein said mammal has (a) a bone fracture, bone trauma, or a bone deficit condition associated with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment, and/or (b) a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's disease, ~~osteoarthritis, rheumatoid arthritis~~, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous dysplasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease.

15. (Currently Amended) A method for inhibiting osteoclast differentiation in a mammal in need thereof comprising administering to said mammal and contacting said osteoclasts with an effective amount of lanthanum (III) compound thereby inhibiting differentiation, wherein said mammal has (a) a bone fracture, bone trauma, or a bone deficit condition associated with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment, and/or (b) a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's disease, ~~osteoarthritis, rheumatoid arthritis~~, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous dysplasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease.

16. (Currently Amended) A method for activating bone formation activity of differentiated osteoblasts in a mammal in need thereof comprising administering to said mammal

and contacting said osteoblasts with an effective amount of lanthanum (III) compound thereby stimulating bone formation, wherein said mammal has (a) a bone fracture, bone trauma, or a bone deficit condition associated with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment, and/or (b) a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's disease, ~~osteoarthritis, rheumatoid arthritis~~, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous displasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease.

17. (Currently Amended) A method for simultaneously stimulating osteoblast differentiation and inhibiting osteoclast differentiation in a mammal having a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's disease, ~~osteoarthritis, rheumatoid arthritis~~, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous displasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease comprising administering to said mammal an effective amount of lanthanum (III) compound.

18. (Original) A method for enhancing bone formation in a mammal in need thereof comprising administering to said mammal an effective amount of a lanthanum (III) compound and at least one bone enhancing agent.

19. (Original) A method according to claim 18 wherein said bone enhancing agent is selected from the group consisting of a synthetic hormone, a natural hormone, oestrogen, calcitonin, tamoxifen, a biphosphonate, a biphosphonate analog, vitamin D, a vitamin D analog, a mineral supplement, a statin drug, a selective oestrogen receptor modulator and sodium fluoride.

20. (Cancelled)

21. (Cancelled)

22. (Withdrawn) A pharmaceutical composition for the treatment or prevention of a bone remodeling disorder comprising a lanthanum (III) compound and a bone enhancing agent.

23. (Currently Amended) A method for inhibiting osteoclastic differentiation whereby to manage or a bone disease which comprises administering to a human or animal subject suffering from said bone disease, wherein said disease is not osteoarthritis or rheumatoid arthritis, a therapeutically effective amount of a lanthanum (III) compound.

24. (Currently Amended) A method for activating osteoblastic differentiation whereby to manage or treat a bone disease which comprises administering to a human or animal subject suffering from said bone disease, wherein said disease is not osteoarthritis or rheumatoid arthritis, a therapeutically effective amount of a lanthanum (III) compound and optionally activating osteoblastic differentiation.

25. (Cancelled)

26. (Previously Presented) A method according to claim 1, wherein said lanthanum (III) compound is a lanthanum carbonate.

27. (Previously Presented) A method according to claim 13, wherein said lanthanum (III) compound is a lanthanum carbonate.

28. (Previously Presented) A method according to claim 14, wherein said lanthanum (III) compound is a lanthanum carbonate.

29. (Previously Presented) A method according to claim 15, wherein said lanthanum (III) compound is a lanthanum carbonate.

30. (Previously Presented) A method according to claim 16, wherein said lanthanum (III) compound is a lanthanum carbonate.

31. (Previously Presented) A method according to claim 17, wherein said lanthanum (III) compound is a lanthanum carbonate.

32. (Previously Presented) A method according to claim 18, wherein said lanthanum (III) compound is a lanthanum carbonate.

33. (Withdrawn) A composition according to claim 22, wherein said lanthanum (III) compound is a lanthanum carbonate.

34. (Previously Presented) A method according to claim 23, wherein said lanthanum (III) compound is a lanthanum carbonate.

35. (Previously Presented) A method according to claim 24, wherein said lanthanum (III) compound is a lanthanum carbonate.

36. (Previously Presented) A method according to claim 1, wherein said lanthanum (III) compound is a lanthanum carbonate hydrate.

37. (Previously Presented) A method according to claim 1, wherein said lanthanum (III) compound is lanthanum carbonate tetrahydrate.

38. (Previously Presented) A method according to claim 26, wherein said lanthanum (III) compound is administered in an amount of 0.01-100 mg/kg/day.

39. (Previously Presented) A method according to claim 26, wherein said lanthanum (III) compound is administered in an amount of 0.05-50 mg/kg/day.

40. (Previously Presented) A method according to claim 26, wherein said lanthanum (III) compound is administered in an amount of 0.1-10 mg/kg/day.

41. (New) A method according to claim 2, wherein said human has a bone remodelling disorder selected from the group consisting of osteoporosis, Paget's disease, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous dysplasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease.

42. (New) A method according to claim 41, wherein the bone remodeling disorder is osteoporosis.

43. (New) A method for increasing bone density in a human in need thereof comprising administering to said human an effective amount of a lanthanum (III) compound, wherein said mammal has (a) a bone fracture, bone trauma, or a bone deficit condition associated with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment, and/or (b) a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's disease, osteoarthritis, rheumatoid arthritis, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous dysplasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease.

44. (New) A method for stimulating osteoblast differentiation in a human in need thereof comprising administering to said human and contacting said osteoblasts with an effective amount of lanthanum (III) compound thereby stimulating differentiation, wherein said mammal has (a) a bone fracture, bone trauma, or a bone deficit condition associated with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment, and/or (b) a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's disease, osteoarthritis, rheumatoid arthritis, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous dysplasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease.

45. (New) A method for inhibiting osteoclast differentiation in a human in need thereof comprising administering to said human and contacting said osteoclasts with an effective amount of lanthanum (III) compound thereby inhibiting differentiation, wherein said mammal has (a) a bone fracture, bone trauma, or a bone deficit condition associated with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment, and/or (b) a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's disease, osteoarthritis, rheumatoid arthritis, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous dysplasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease.

46. (New) A method for activating bone formation activity of differentiated osteoblasts in a human in need thereof comprising administering to said human and contacting said osteoblasts with an effective amount of lanthanum (III) compound thereby stimulating bone formation, wherein said mammal has (a) a bone fracture, bone trauma, or a bone deficit condition associated with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment, and/or (b) a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's disease, osteoarthritis, rheumatoid arthritis, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous dysplasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease.

47. (New) A method for simultaneously stimulating osteoblast differentiation and inhibiting osteoclast differentiation in a human having a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's disease, osteoarthritis, rheumatoid arthritis, achondroplasia, osteochondrytis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous dysplasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease comprising administering to said human an effective amount of lanthanum (III) compound.



48. (New) A method according to claim 1, wherein said human has osteoporosis.
49. (New) A method according to claim 42, wherein said osteoporosis is any one of primary osteoporosis, secondary osteoporosis, post-menopausal osteoporosis, male osteoporosis and steroid induced osteoporosis.
50. (New) A method according to claim 43, said wherein lanthanum (III) compound is selected from the group consisting of lanthanum carbonate, lanthanum carbonate hydrate and lanthanum chloride.
51. (New) A method according to claim 44, said wherein lanthanum (III) compound is selected from the group consisting of lanthanum carbonate, lanthanum carbonate hydrate and lanthanum chloride.
52. (New) A method according to claim 45, said wherein lanthanum (III) compound is selected from the group consisting of lanthanum carbonate, lanthanum carbonate hydrate and lanthanum chloride.
53. (New) A method according to claim 46, said wherein lanthanum (III) compound is selected from the group consisting of lanthanum carbonate, lanthanum carbonate hydrate and lanthanum chloride.
54. (New) A method according to claim 47, said wherein lanthanum (III) compound is selected from the group consisting of lanthanum carbonate, lanthanum carbonate hydrate and lanthanum chloride.
55. (New) A method for enhancing bone formation in a mammal in need thereof comprising administering to said mammal an effective amount of a lanthanum (III) compound, wherein said mammal has (a) a bone fracture, bone trauma, or a bone deficit condition associated with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment, and/or (b) a bone remodeling disorder selected from the group consisting of osteoporosis, Paget's disease,

osteoarthritis, rheumatoid arthritis, achondroplasia, osteochondritis, hyperparathyroidism, osteogenesis imperfecta, congenital hypophosphatasia, fibromatous lesions, fibrous dysplasia, multiple myeloma, abnormal bone turnover, osteolytic bone disease, osteomalacia and periodontal disease,

wherein said lanthanum (III) compound is not a chelate.